Unite.

Fully Constructed - FC

This option includes no fiber from any outside party. Payments can be made under two separate scenarios:

Scenario 1	NRC $0	MRC $40,403
Scenario 2	NRC $500,000	MRC $23,069

Prices given are for a ten-year agreement. These prices are firm and therefore cannot be changed during the agreement term unless both parties agree. This pricing is for a full "turn key" GigE WAN solution that includes outside plant fiber optic cable and required hardware, internal transmission (GigE) equipment, fiber distribution panels and jumpers required to connect same.

PRICING SHEET B to GCCISD RFP # 121103-2

Third Party – TP

This option is not firm. Due to the lack of time prior to bid closing Unite has not been able to finalize negotiations with this third party fiber owner. See Attachment A to Pricing Sheet B for specific fiber locations by third party. It is expected that the Third party provider has additional build out plans that may produce synergies for both GCCISD and the third party. Therefore prices provided here should be considered *NOT TO EXCEED* type pricing.

Scenario 1	NRC	MRC
	$0	$34,930
Scenario 2	NRC	MRC
	$500,000	$18,264

Prices given are for a ten-year agreement. These prices are firm and therefore cannot be changed during the agreement term unless both parties agree. This pricing is for a full "turn key" GigE WAN solution that includes outside plant fiber optic cable and required hardware, internal transmission (GigE) equipment, fiber distribution panels and jumpers required to connect same.

December 18, 2003

Mr. Lester Sloan
Director of Purchasing
Goose Creek Consolidated Independent School District (GCCISD)
4544 I-10 East
Baytown, Texas 77521

Reference: GCCISD RFP #121103-02, Network Infrastructure Upgrade Solution, Option #3:
Wide Area Network Services, Addendums 1 & 2 received.

Dear Mr. Sloan,

Interfacing Company of Texas, Inc. (ICTX), is please to offer this response to the above referenced
request in the following pages and attachments.

Our proposal includes options for underground and/or aerial construction methods, along with
options for single path and diverse path (ring) redundancy. Also included are options for lump-
sum payment or E-Rate-able lease payment options.

Thank you for the opportunity to provide this proposal. Please do not hesitate to contact me with
any questions.

Sincerely,

Carl Merzi
President
ICTX - Interfacing Company of Texas, Inc.

Attachments
1. ICTX response – Overview, Scope of Work, Support and Maintenance Plan –
   CONFIDENTIAL INFORMATION
2. Pricing Tables – Options 1 & 2 – CONFIDENTIAL INFORMATION
3. Site List (including Fiber Topology configuration) – CONFIDENTIAL INFORMATION
4. Proposed Fiber Nework Maps - CONFIDENTIAL INFORMATION
5. Bid Documents as required by GCCISD
6. ICTX company information and references

INTERFACING COMPANY OF TEXAS, INC. - P.O. BOX 131835 - THE WOODLANDS, TEXAS 77393-1835
MAIN (713) 895-0000 - FAX (713) 895-0088 - www.interfacinggroup.com
Confidential - GOOSE CREEK CISD FIBER WAN PROPOSAL 031218.doc - Page 1 of 1

ICTX FIBER NETWORKS

Option 2 Pricing Options Summary Table - Provided For	Quote Date	Valid Until	Quote Number
Goose Creek Consolidated Independent School District	12/18/2003	4/16/2004	031218-GC02

	Summary	Dark Fiber / Hardware Purchase and Telecommunications Lease Options for School District Optical Fiber WAN, connecting sites listed in Site List. Includes options for Underground and/or Aerial Construction. Pricing is for turnkey delivery, including permit costs and single-lateral construction into site MDFs.

Option	Description	Purchase Option			E-Rateable Telecommunications Lease Option		
		Fiber Network	Hardware	Maintenance (Fiber & Hardware) - MRC	NRC	MRC	Term
A	**Ring Path Design:** 100% Underground Installation (with exception of certain waterways) - Includes Backbone and all Laterals	$1,692,554	$349,518	$3,613	$1,190,195	$23,543	60
B	**Ring Path Design:** Backbone is 100% Underground / Some Laterals are Aerial Construction	$1,586,184	$349,518	$3,613	$1,111,403	$22,853	60
C	**Ring Path Design:** Backbone and Laterals are mix of Underground and Aerial Construction	$1,486,769	$349,518	$3,613	$1,037,761	$22,209	60
D	**Ring Path Design:** 100% Aerial Installation (with exception of some roadway and other crossings) - Includes Backbone and all Laterals	$1,401,974	$349,518	$3,613	$974,950	$21,660	60
				-			

Please Note
NRC - Non-Recurring Charge, MRC - Monthly Recurring Charge
For Telecommunications Lease Option, Post Term MRC (Lease) for Years 6-10 is: $3,613.00 + CPI adjustment

December 15. 2003

Mr. Lester Sloan
Director of Purchasing
Goose Creek CISD
4544 IH-10 East
Baytown TX 77521

Dear Mr. Sloan:

It is our pleasure to provide you with this proposal for educational wireless broadband services in response to RFP # 121103-2. Trillion is the leading provider of wireless broadband services for the education marketplace. We look forward to providing your district with the unmatched value and service that we are currently providing to over 750 school customers!

While touring your district, we were very impressed with your technology capabilities and facilities. As we discussed, the challenge for school districts today is putting an IP-based Wide Area Network (WAN) in place, which allows you to transport the types of learning applications that will be required in the future. Our solution positions Goose Creek CISD to accomplish just that.

Highlights of this proposal include:

<u>Wireless Wide Area Network</u>
The proposed WAN solution consists of:

- Trillion's K-12 Wireless WAN Bundle providing 45Mbps full duplex bandwidth in a ring to the following nine (9) sites:
  - Sterling High School
  - Cedar Bayou Junior High School
  - Robert E. Lee High School
  - Highlands Junior High School
  - Central Administration
  - Gentry Junior School
  - Horace Mann Junior High School
  - Baytown Junior High School
  - Highlands Elementary School

- Trillion's K-12 Wireless WAN Bundle providing 10Mbps full duplex bandwidth spurs to the following eleven (11) sites:
  - Steven F. Austin Elementary School
  - Ashbel Smith Elementary School
  - Lamar Elementary School
  - Travis Elementary School
  - Harlem Elementary School
  - Alamo Elementary School
  - Bowie Elementary School
  - Carver Elementary School
  - San Jacinto Elementary School
  - Pumphrey Elementary School
  - Crockett Elementary School

- Utilize existing fiber connections for the following sites:

Sterling High School	to	Technology Management Systems
Horace Mann JHS	to	Dezavala Elementary School
Pumphrey Elementary School	to	West Town/ SCGC / ALP
Highlands Elementary School	to	Hopper Primary
Alamo Elementary School	to	Stewart Career Center

- Two (2) T-1 levels of access into the public Internet

<u>Voice Over Network Telephony Services</u>
- Voice line capacity for up to 2344 phones.
- Trunking capacity for up to five (5) T-1s for interface to the public switch telephone network.

This proposal does not include providing or purchasing telephone trunks or individual phone lines to the public switched telephone network.

- The following bundled services are also included:

  - Portal
  - Email
  - DNS
  - Firewall
  - Filtering

- Full maintenance support of the system, 24-hour monitoring and access to the Customer Wi-Zone – our online support and monitoring console.

Our experience has shown that the full package of services listed above is 100% eligible for E-Rate funding. There are no installation costs for the district and the contract is contingent upon the school district receiving funding commitment from the E-Rate program.

I would be happy to answer any questions related to this proposal or you can contact Hal Baylor. Trillion's Regional Sales Manager, at (512) 635-6246. We look forward to working with you and your district.

Sincerely.

Brian Potts
President und CEO

Enclosure(s):   Proposal, Services Agreement Brochure

Section 4.   Proposed Solution

Option 1:   Internal Connections

Infrastructure components necessary to connect campuses, classrooms, and libraries.

Trillion Response: Trillion will not be bidding on Option 1.

Option 2:   Internet Access
Access to the Internet and or Internet2.

Trillion Response: Internet Access

- Two (2) T-1 levels of access into the public Internet

Trillion always partners with direct tier-1 Internet backbone providers, where available, to ensure the highest quality scalable Internet services to our customers.

Option 3:   Wide Area Network Services

The network construction or build-out as appropriate, of voice, data, and/or video, providing connections between schools. This may include fiber, wireless, or both.

Trillion Response:
Description of Services

Trillion is pleased to present this proposal to Goose Creek CISD for the following services:

Wireless Wide Area Network
The proposed WAN solution consists of:

- Trillion's K-12 Wireless WAN Bundle providing 45Mbps full duplex bandwidth in a ring to the following nine (9) sites:
  - Sterling High School
  - Cedar Bayou Junior High School
  - Robert E. Lee High School
  - Highlands Junior High School
  - Central Administration
  - Gentry Junior School
  - Horace Mann Junior High School
  - Baytown Junior High School
  - Highlands Elementary School

- Trillion's K-12 Wireless WAN Bundle providing 10Mbps full duplex bandwidth spurs to the following eleven (11) sites:
  - Steven F. Austin Elementary School
  - Ashbel Smith Elementary School
  - Lamar Elementary School
  - Travis Elementary School
  - Harlem Elementary School
  - Alamo Elementary School
  - Bowie Elementary School,
  - Carver Elementary School
  - San Jacinto Elementary School
  - Pumphrey Elementary School
  - Crockett Elementary School

Section 5. Pricing and Terms

Trillion custom designs the wireless network specifically for your school district. The prices shown below are for all of the services shown in Section 2.

Standard Payment Plan

Standard Payment Plan	Total Monthly Cost	Total Annual Cost	Total 5 Year Contract Cost
Total Cost	$58,525	$702,300	$3,511,500
80% E-Rate Discount	(46,820)	(561,840)	(2,809,200)
District Net Price	**$11,705**	**$140,460**	**$702,300**

Other Payment Options

Option I: **Down Payment of $412,116**

	Total Monthly Cost	Total Annual Cost	Total 5 Year Contract Cost
Total Cost	$47,715	$572,580	$2,862,900
80% E-Rate Discount	(38,172)	(458,064)	(2,290,320)
District Net Price	**$9,543**	**$114,516**	**$572,580**

Option II: **Down Payment of $824,233**

	Total Monthly Cost	Total Annual Cost	Total 5 Year Contract Cost
Total Cost	$36,845	$442,140	$2,210,700
80% E-Rate Discount	(29,476)	(353,712)	(1,768,560)
District Net Price	**$7,369**	**$88,428**	**$442,140**

Option III: **Down Payment of $1,236,349**

	Total Monthly Cost	Total Annual Cost	Total 5 Year Contract Cost
Total Cost	$25,995	$311,940	$1,559,700
80% E-Rate Discount	(20,796)	(249,552)	(1,247,760)
District Net Price	**$5,199**	**$62,388**	**$311,940**

A 74% E-Rate discount is utilized for the calculation above. The district's portion of the payment can slide based upon the final E-Rate percentage that the district is eligible to receive.

Our Value System

No upfront installation costs.

There are no upfront installation or equipment costs of any kind. Your school district simply pays its matching portion when E-Rate funds are approved and service is activated. Trillion then bills the SLD for the E-Rate eligible funding portion.

This proposal is valid until March 1, 2004. A Services Agreement must be executed in order for a binding agreement to exist between the parties.

Purchase of End User Phones
The above pricing does not include providing or purchasing end user phones and handsets. The prices for end user phones are shown below:

Phone Description	Quantity	Unit Cost	Extended Cost
Shoreline IP100 Phone	1955	$259.00	$506,345.00

Generally, the purchase of end user phones is eligible for E-Rate discounts as an Internal Connections filing.

GOOSE CREEK CONSOLIDATED INDEPENDENT SCHOOL DISTRICT

Frankie Jackson
Technology Management Systems (TMS)

Date: January 14, 2004

To: Dr. Sultis

From: Frankie Jackson

Subject: Approve the Network Infrastructure Upgrade Request for Proposal
               (RFP) #121103-2 and Filing for E-Rate Funding Discounts.

The Technology Management Systems (TMS) department is requesting approval to award the Network Infrastructure Upgrade Request for Proposal (RFP) #121103-2 to IBM for options 1, 4, 5, and 6, and Time Warner for options 2 and 3. A list of the vendors providing proposals for the various options is listed in the following table. It is recommended that Option 3 – Wide Area Network services be explored in greater detail during the Board meeting. A technical presentation will be provided during the board meeting to review each of the designs and associated costs.

Vendor	Option 1 Internal Connections % Discount	Option 2 Internet Access per year	Option 3 Wide Area Network Services (5 years)	Option 4 Voice/ IP Solutions % Discount	Option 5 Other Technology Solutions	Option 6 19 Instructional Fileservers Aprvd. 12-8-03
Time Warner		$21,000	$845,000 $1,760,000			
IBM	44%		$1,680,725	44%	Dependent on option 3	$93,765
Trillion		$30,000	$1,667,700	Dependent on option 3	Dependent on option 3	
Unite		$54,120	$1,884,140			
Verizon	36.5%	$74,796	$1,861,744	36.5%	Dependent on option 3	
Interfacing Co. of Texas (ICTX)		Dependent on option 3	$2,152,482		Dependent on option 3	
Phonoscope		$14,400	$2,380,000 $1,140,000			
Gateway						$92,549
MSC						119,149

A summary of each option included in the RFP is described in the following, along with the justification for each vendor selected.

Option 1: Internal Connections – infrastructure components necessary to connect campuses, classrooms, and libraries.

- *Justification for vendor*: IBM is offering a 44% discount for all internal connections, primarily Cisco. This is the best discount available on the market today.

Option 2: Internet Access – connection fees to access the Internet.

- *Justification for vendor*: Time Warner is offering a 5 megabyte connection that is scaleable to 10 megabytes. Further, a transition to Time Warner for Internet services was completed in December 2003. The only vendor that is less expensive than Time Warner is Phonoscope, but Phonoscope is only offering a 3 megabyte connection. Byte for byte, Time Warner is less expensive, e.g. a 5 meg connection with Phonoscope is estimated at $24,000. The following is a summary of connection speed offerings by each vendor:

Time Warner	5 meg connection scaleable to 10
Trillion	2 T-1 lines
Unite	9 meg connection
Verizon	5 meg connection
ICTX	Bundled with option 3 if awarded
Phonoscope	3 meg connection

Option 3: Wide Area Network Services – the network construction or build-out as appropriate, of voice, data, and/or video, providing connections between schools. This may include fiber, wireless, or both.

- *Justification for vendor*: Time Warner is offering the lowest cost solution, but this must be reviewed in greater detail during the Board meeting. Other options provide greater opportunity for growth and ownership in the future. However, at this time, Time Warner is the only company that has fiber in place in Baytown today; therefore the deployment time would be shorter (90 days). Time Warner could offer an immediate solution to our network constraints today.

Option 4: Voice/Video IP solutions – commercially-available telecommunications service by combining voice/data/video

- *Justification for vendor*: IBM is offering a 44% discount for all voice / video IP solutions. .

Option 5: Other technology-based systems such as:

- o Conferencing services – video conferencing for educational and library purposes
- o Digital Transmission Services – leased data circuits for voice, video, and/or data that connects schools
- o Distance Learning – video and audio technologies to allow students to interactively participate
- o Interactive TV – remotely conduct classes and interact using a classroom television
- o Server consolidation – consolidate all or as appropriate servers in a centralized location
- o Upgrade network operating systems software – standardize network OS to one platform

- *Justification for vendor*: IBM is offering overall the lowest discounts for multiple options of technology-based systems. It is recommended that we form a partnership with IBM to explore these options in the future, if an when needed.

Option 6: Local Area Network (LAN) fileservers for elementary and junior schools.

- *Justification for vendor*: IBM is offering the most reliable, state-of-the-art server at a competitive cost. Approval to purchase this item is included under a separate item titled: **Consideration of Purchase for 19 Instructional Fileservers at each Elementary and Junior School.**

It is recommended that this item be submitted to the Board of Trustees at the January 20, 2004 board meeting for approval. The purchase for options 1-5 will be E-Rate dependent based on funding discounts received from the Schools id Library Division (SLD).

If you have questions or need additional information, please let me know.

Technology Fiber Network Project Board Update

Consideration of Technology Network Infrastructure Upgrades and Applying for E-Rate Funding Discounts

Building a Technology Infrastructure for the Future

January 20, 2004

Strategic Intent: Utilize technology to provide limitless opportunities

Objective of This Presentation

➤ Seek direction from the Board of Trustees regarding the Fiber Network Project and applying for E-Rate.

➤ Discuss and approve the options presented in the Network Infrastructure Upgrade Request for Proposal (RFP) #121103-2.

   ➤ **Primarily focus on Option 3 – Wide Area Network**

Network Infrastructure Upgrade Request for Proposal (RFP) #121103-2

What are the associated costs to the District?

- Cost for Options 1-5 is <u>$0 at this time.</u>
  - These options are eligible for E-Rate discounts if we apply by February 4, 2004.

- Cost for Option 6 is $138,509 <u>(covered under item F)</u>
  - This is for the purchase of 19 instructional servers for the elementary and junior schools.
  - Funding source: 1999 Technology Bond
  - This item was approved by the Board on December 8, 2003.

Rationale:
Board Goal for the 2003-2005 School Years
Goal 7 E

- The District will increase technology network capacity inside the district wide area network and to the Internet.

What Does This Have to Do With E-Rate?

➢ E-Rate is a Federally Funded Discount Program through the Schools and Libraries Division (SLD) of the Federal Government.

➢ Technology Network services are E-Rate eligible, based on Free & Reduced Lunch ratios.

- GCCISD has been at a 67% discount in funding.

- E-Rate Eligible Services List

E-Rate Background

➢ Since 1999, Goose Creek has filed for E-Rate Discounts.
- Have received $200-300K each year

➢ Since 2002 we have discussed the need to build a high-speed fiber network.
- Network services are available through E-Rate discounts.

➢ Received Board approval in January 2003 to file for E-Rate discounts for year 2004-2005 to support the funding of the fiber project.
- Currently our E-Rate filing for January 2003 is **still under review.**

➢ Provided a status to the Board on July 21, 2003 about the fiber network project and a status of E-Rate.

➢ Solicited the Network Infrastructure Upgrade Request for Proposal (RFP) #121103-2 in November 2003 in preparation for E-Rate filing and opened proposals on December 18, 2003.

➢ The E-Rate filing window for 2004-2005 is February 4, 2004.

Network Infrastructure Upgrade Request for Proposal (RFP) #1211003-2

Order of the Options for Review

- Options 1, 2, 4, 5, and 6
- Option 3 – Wide Area Network Services

Network Infrastructure Upgrade Request for Proposal (RFP) #1211003-2

Options in the RFP and Summary of Costs

Vendor	Option 1 Internal Connections % Discount	Option 2 Internet Access per year	Option 3 Wide Area Network Services (5 years)	Option 4 Voice/ IP Solutions % Discount	Option 5 Other Technology Solutions	Option 6 19 Instructional Fileservers Aprvd. 12-8-03
Time Warner		$21,000				
IBM	44%			44%	Dependent on option 3	$93,765
Trillion		$30,000		Dependent on option 3	Dependent on option 3	
Unite		$54,120				
Verizon	36.5%	$74,796		36.5%	Dependent on option 3	
Interfacing Co. of Texas (ICTX)		Dependent on option 3			Dependent on option 3	
Phonoscope		$14,400				
Gateway						$92,549
MSC						119,149

Recommendation for Option 2

- # Internet Access
  - ## Service provider fees to access the Internet.
    - ### Recommendation: Time Warner
      - Time Warner is offering a 5 meg connection that is scaleable to 10 on demand for **$21,000 per year.**
      - Transitioned to Time Warner for Internet in December 2003.
      - Phonoscope is less cost; however, it is a 3 meg connection.

Time Warner	5 meg – 10 meg
Trillion	2 T-1 lines (3 meg)
Unite	9 meg
Verizon	5 meg
ICTX	Bundled with option 3
Phonoscope	3 meg

Network Infrastructure Upgrade Request for Proposal (RFP) #1211003-2

Analysis of Option 3
Wide Area Network Services

Network construction or build-out as appropriate, of voice, data, and/or video providing connections between schools (may include fiber, wireless, or both).

Technology Network Infrastructure History

- 1992 – Installed 23 T-1 Lines: 1.5 megabyte **(connection at $85 per month)**
- 1994 – Started 1994 Technology Bond
  - Initiated the Wide Area Network (WAN)
- 1995 – Connected Secondary Schools to the T-1 lines
- 1997 – Connected Remaining Schools to T-1 lines
- 1998 – Connected to the Internet through Region IV
  with one T-1 Line
- 1999 – Started 1999 Technology Bond
  - Every teacher and administrator has at least 1 computer
  - Working towards 4:1 computer to student ratio

- 2000 – Added a 2nd T-1 Line to Region IV for Internet
- 2000 – Starting adding additional T-1 Lines at full price **(avg. $518 a month)**
  - **Central Administration**
  - **Carver Elementary**
  - **Transportation/Maintenance/Security (Ron Craft)**
  - **SCGC/Lee Annex**
  - **Baytown Wetlands Center**
  - **Highlands Elementary**
  - **Baytown Junior School**

- 2003 – Transitioned to Time Warner for Internet
  Services (increased from 3 megabytes to 5-10 megabytes

Current Situation

➢ We have limited network bandwidth.

> This means limited network capability (throughput) in the district Wide Area Network (WAN) and to the Internet.

> Running at about 90% utilization

> Restricted future growth or expansion capabilities for administrative and/or instructional applications.
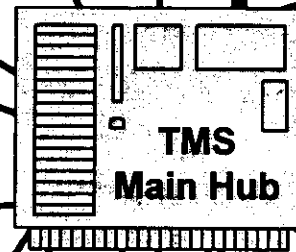
GCCISD Wide Area Network

Total Monthly Cost

T-1 lines grandfathered at $84.88	1697.60
7 T-1 lines at full price	3616.95
Internet connection fee to Time Warner	1833.33
Total for Wide Area Network	**7147.88**

Hopper

Highlands Jr.

Highlands Elementary

Harlem

Internet

Administration

Sterling

TMS Main Hub

Baytown Junior

Travis

West Town

Pumphrey

SCGC

ALP

San Jacinto

Lee Annex

Wetlands Lee

Lamar

Carver

North Main

Bowie

Gentry

Crockett

Austin

Cedar Bayou

Alamo SCC

Ashbel Smith

Horace Mann DeZavala

Current Monthly Costs

Internet $1750

New T-1 Lines $518

Fiber $0

Old T-1 Lines $85

Why Do We Need to Upgrade Our Wide Area Network?

➤ We need the ability to provide more learning opportunities for students.

  ➤ Internet based software access
  ➤ Distance learning
  ➤ Textbooks online
  ➤ Web-based curriculum
  ➤ Video conferencing
  ➤ Online testing

➤ We need faster response to the Internet.

  ➤ Student research and learning
  ➤ Teacher research
  ➤ Administrative application needs

Why Do We Need to Upgrade Our Wide Area Network?

- We must contain technology-based costs.
  - Reduce overhead, support, and license costs.
  - Consolidate Local Area Networks.
  - Provide remote support and access.

- We will not be capable of running future instructional and administrative applications.
  - Finance, Student Accounting, Food Service, etc.

- We must create a technological foundation for the future.